School of Computing Sciences

Department of Computer Science and Engineering

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REPORT SUBMITTED FOR SECOND REVIEW

BATCH No: T_12

Project Title: Ezfinup

STUDENT NAME(S)	REGISTER NUMBER(S)
V Vaishnav	17113027
Sidharth R V	17113035
Sarvesh S	17113061

Supervisor Name: _____

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CHAPTER 1

PROJECT DESCRIPTION

This project focuses on a web application that will be able to provide vital information on the stock of a company listed on the market, such as Open, Close, Volume, etc. Our app also provides details on the company's financial and technical details, such as VWAP, MA, etc. In addition to these features, the app provides a stock price forecast for limited stocks listed in the NIFTY 50 index where the closing price of the stock is forecast and shown for the next 3 days so that an investor willing to invest in the company can know when to start investing or selling his holdings. To support this price forecast, an additional feature based on algorithmic trading that provides the buying and selling signals for all the shares listed in the exchange that will help new investors and traders to have an idea of when to enter into a new position or exit their open positions. This can help new investors and traders to make better trading decisions.

CHAPTER 2

MODULE DESCRIPTION

Dashboard:

In this module we have given a distinct dashboard for each and every user so that they can have their personalised charts and information. The dashboard consists of list of companies that we integrated with the prediction so that user can search the companies that they need. Stock screener based on candle stick charts has also been added so that traders can search for specific patterns for a wide range of stocks. Important financial details are also displayed so that user can perform fundamental analysis.

Algorithmic Trading:

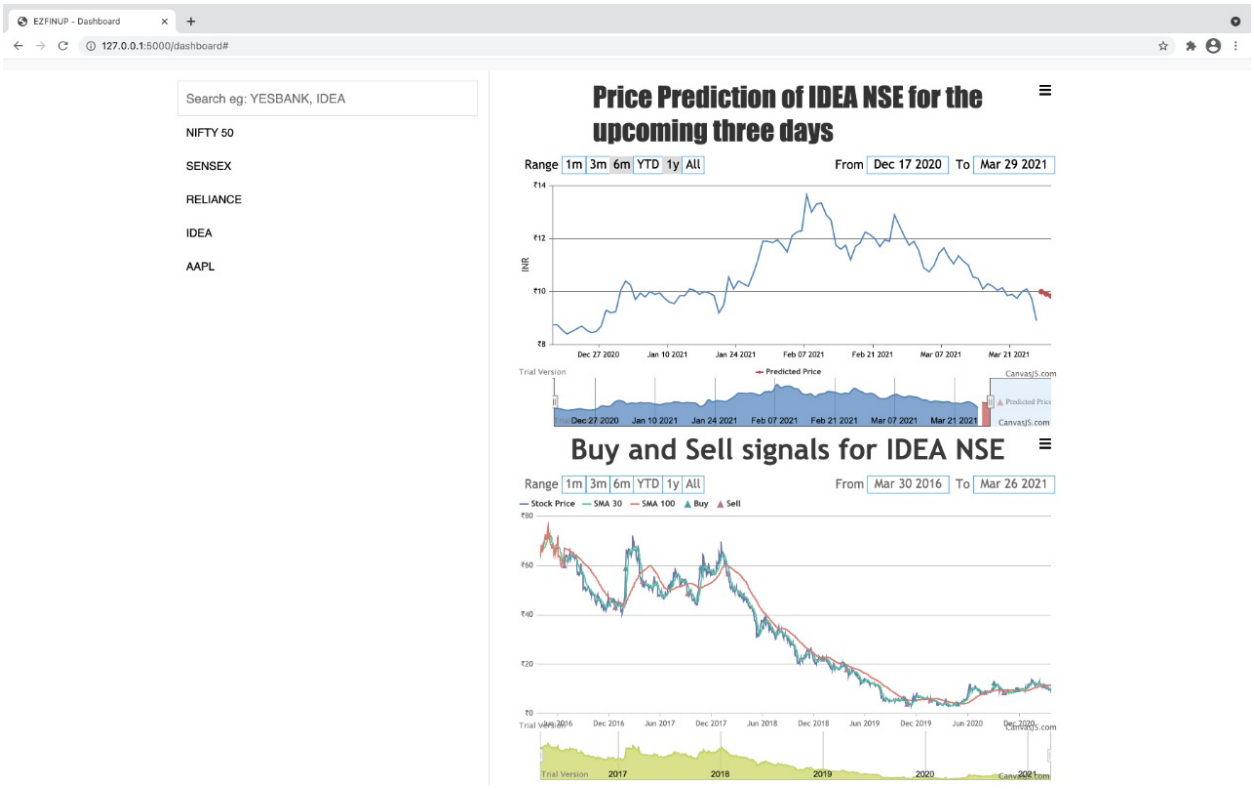
Algorithmic Trading is a process for executing orders using pre-programmed trading instructions to account for variables such as price, timing and volume. We use Exploratory Data Analysis (EDA) to find trading signals for entry and exit points in a specific stock.

Prediction Model:

We use Long-Short Term Memory (LSTM) a commonly used RNN. Considering the type of data that we will be feeding our model and the ability of the RNN to allow information to persist unlike standard feed forward neural network (they could only process single data points eg:Images), an LSTM is best fit for these types of problems. Using this method the end of the day stock price can be predicted. We use Micro-service architecture to host the features of our platform such as predicting buying and selling signals in the cloud.

CHAPTER 3

SAMPLE SCREENSHOTS



CHAPTER 4

TESTING AND EVALUATION

The stock prediction model using LSTM has been constructed and has been tested with 1 small-cap, 2 medium-cap, 2 large-cap companies to predict their end of the day stock price. Stock screener based on candle stick charts has been given in the dashboard. The features of our platform such as predicting, buy and sell signals has been deployed in the cloud and integrated into our web application using micro-service architecture. These end points have been tested using postman to ensure the effectiveness and working of the API's. Our system to predict the stock price for five companies has been tested and evaluated for each company prediction that we have given. The model was able to find the closing stock price of those company with 85% accuracy.

CHAPTER 5

INDIVIDUAL TEAM MEMBER'S CONTRIBUTION

Sidharth R V:

User experience plays a vital role in every product. Our UI/UX web application is carefully designed by **Sidharth R V,** who aims to provide best possible UX for our users in our web application.

Sarvesh S:

The main backend services, cloud services and integration of all the core features of our application are handles by **Sarvesh S** to provide users with seamless experience.

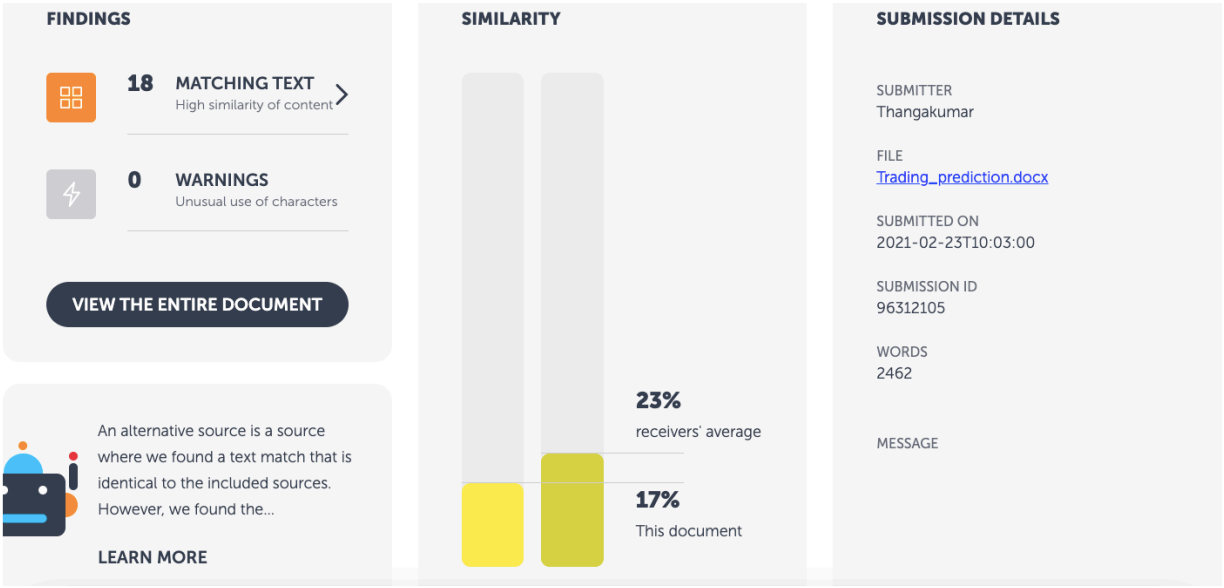
Vaishnav V:

Finally, The core of our web application, stock price forecast and algorithmic trading is done by **Vaishnav V** which makes our app complete.

CHAPTER 6

TECHNICAL PAPER

Proof of plagiarism checking in Urkund:



Proof of submission of paper in International Conference/Journal: